IN THE SPECIFICATION

Please amend page 1 by inserting the following heading between the title of the invention and the first paragraph as follows:

"FIELD OF THE INVENTION"

Please amend page 1 by inserting the following heading between the first and second paragraphs as follows:

"BACKGROUND OF THE INVENTION"

Please amend page 2 by inserting the following heading between the first and second complete paragraphs as follows:

"BRIEF SUMMARY OF THE INVENTION"

Please amend page 4 by inserting the following heading above the first line:

"BRIEF DESCRIPTION OF THE DRAWINGS

An embodiment of the present invention..."

Please amend page 4 by inserting the following heading between the sixth and seventh paragraphs as follows:

"DETAILED DESCRIPTION OF THE INVENTION

Referring to Figure 1, the illustrated system comprises a turbocompressor 1..."

Please amend page 8 by inserting the following language between the "CLAIMS" heading and claim 1:

"I/We claim:"

Please amend page 3 by canceling the following text:

"~~By limiting the duty pressure rise to less than 1500 millibar a very efficient impeller can be designed which in combination with a vaneless diffuser produces a flat efficiency verses flow curves. Such an arrangement is highly efficient over a wide range of motor speeds.~~

~~Preferably the pressure rise ranges from 850 to 1200 millibars. Maximum efficiency may be in the range 1000 to 1050 millibars. The impeller design can be optimised to suit the particular application. Similarly the volute can be designed to optimise efficiency given the vaneless nature of the diffuser. Preferably no vanes are provided in the air inlet, again avoiding energy losses across at least some of the range of possible impeller rotational speeds. The diffuser passageway may be a simple annular passageway of uniform width in the axial direction.~~

~~The inverter may be controlled by an oxygen demand sensor coupled so as to monitor the oxygen content of sludge in the sludge treatment plant.~~"

Please amend page 4 by inserting the following text between the seventh and eighth paragraphs as follows:

"Referring to Figure 1, the illustrated system comprises a turbocompressor 1 delivering a flow of air represented by line 2 to an aeration vessel 3, the delivered air being for example bubbled through sewage sludge retained in the vessel 3. Typically the output pressure of the turbocompressor will be relatively low, for example 1.2 bar, with a maximum flow rate of for example 11,000 m^3 per hour.

By limiting the duty pressure rise to less than 1500 millibar a very efficient impeller can be designed which in combination with a vaneless diffuser produces a flat efficiency verses flow curves. Such an arrangement is highly efficient over a wide range of motor speeds.

Preferably the pressure rise ranges from 850 to 1200 millibars. Maximum efficiency may be in the range 1000 to 1050 millibars. The impeller design can be optimised to suit the particular application. Similarly the volute can be designed to optimise efficiency given the vaneless nature of the diffuser. Preferably no vanes are provided in the air inlet, again avoiding energy losses across at least some of the range of possible impeller rotational speeds. The diffuser passageway may be a simple annular passageway of uniform width in the axial direction.

The inverter may be controlled by an oxygen demand sensor coupled so as to monitor the oxygen content of sludge in the sludge treatment plant.

The turbocompressor 1 is driven by a permanent magnet motor 4 having an output shaft 5 which is directly coupled to an input shaft of the turbocompressor. Thus the motor 4 and turbocompressor 1 rotate in synchronism. An inverter 6 controls the supply of power to

the motor 4, the inverter delivering a current in the range of 200 to 480 Amps to produce a useful power output of the order of up to 300kW. The power supplied to the motor 4 by the inverter 6 is controlled by an input 7 to the inverter provided by an oxygen demand sensor 8 which senses the oxygen demand in the vessel 3. Thus if the oxygen demand is above a predetermined maximum threshold, the inverter 6 drives the motor 4 at full speed, that speed equating to the turbocompressor speed which will deliver the maximum volume of air to the vessel 3. When the sensed oxygen demand falls below the threshold, the motor speed is reduced to match the volume of air supplied to the oxygen demand."